Carbon Sequestration Leadership Forum in Brief

CSLF Technology Aims at Largest Sources of CO_2 Emissions; Joins Developed and Developing Nations in Climate Activity

The international Carbon Sequestration Leadership Forum (CSLF) is a voluntary climate initiative of developed and developing nations that account for 75 percent of all manmade carbon dioxide emissions. Members engage in cooperative technology development aimed at enabling the early reduction and steady elimination of emissions that account for more than 60 percent of the world's CO_2 – those of electric generation and other heavy industrial activity.

Pending business includes the first direct involvement of the developing nations China and India in matters relating to the potential curtailment of industrial carbon dioxide.

Formed in 2003, CSLF marshals intellectual, technical and financial resources from all parts of the world to support the long-term goal of the United Nations Framework Convention on Climate Change – the stabilization of atmospheric CO_2 concentrations in this century. Members are dedicated to collaboration and information sharing in developing, proving safe, demonstrating and fostering the worldwide deployment of multiple technologies for the capture and long-term geologic storage of carbon dioxide at low costs; and to establishing a companion foundation of legislative, regulatory, administrative, and institutional practices that will ensure safe, verifiable storage for as long as millennia.

Geologic storage at great depth is possible in depleted and declining oil fields, which can enhance near-term supply by boosting recovery and also increase reserves by making more petroleum recoverable; in natural gas fields; in unmineable coal seams, which may add to natural gas supply by displacing methane; in saline reservoirs which underlie much of the world; and in other significant geologic formations such as basalt.

Preliminary findings indicate the world's potential storage capacity is sufficient to hold all emissions for several centuries and that there is a good match between large-scale CO_2 sources and storage formations. Many CSLF-approved demonstrations are meant to quantify the potential and identify the best storage sites.

Ten demonstrations were endorsed by CSLF-nation energy ministers last year. These include the Castor Project, whose ultimate objectives include storage of up to 30 percent of Europe's industrial emissions; and the CO_2Sink demonstration near Berlin, whose objectives include assessing the potential of a reservoir-type that underlies much of Europe.

Eight new projects are pending presentation at next year's CSLF Ministerial Meeting. These include projects to quantify the storage capacity of China in a variety of geologic formations and of India in basalt formations. An early assessment of basalt in the United States suggested the potential to take all emissions for hundreds of years.

The new projects will be among the matters discussed when the Forum's Policy Group and Technical Group gather in Berlin from September 27-to-29 to begin joint preparations for the 2006 ministerial. The two groups coordinate the month-to-month activities of CSLF participants and stakeholders for the ministers.

The Forum was organized as a technical working group to develop technology and processes for dealing with greenhouse gases independent of other climate-change activity. It was formally named a medium of cooperation with the developing nations last summer by the prime ministers, premiers and presidents of the G-8 nations. Similar notations on cooperation have been made in bi-lateral agreements such as those earlier this year between the Germany and the U.S. and the European Union and the U.S.

The G-8 leaders endorsed CSLF activities in Gleneagles Plan of Action on Climate Change, Clean Energy and Sustainable Development and at the same time pledged to seek greenhouse gas stabilization through the United Nations climate agreement. The Intergovernmental Panel on Climate Change is preparing a Special Report on Carbon Dioxide Capture and Storage for presentation this fall to the parties to the agreement.

CSLF activities acknowledge the International Energy Agency's finding that the world will have to rely on fossil energy for economic growth and stability during the indefinite period required to pass from the present to a point in the future where low- and no-carbon energy sources can meet most requirements. The challenge is to reduce emissions while fossil-energy use rises.

Forum members represent the world's largest blocs of economic activity, including the North America Free Trade Area, the European Union and the leading economies of Asia. Members are: Australia, Brazil, Canada, China, Colombia, Denmark, the European Commission, France, Germany, India, Italy, Japan, Mexico, the Netherlands, Norway, Russia, South Africa, the United Kingdom, the United States. Approved for ministerial ratification are new members South Korea and Saudi Arabia, whose interest underscores the potential link between enhanced oil recovery and initiating cost-effective sequestration. The Forum involves the world's major users and producers of fossil energy in collaborative, constructive activity on the main greenhouse gas.

In addition, all Forum members are eligible to participate in the U.S. FutureGen Project, which will be the prototype for zero-emissions electric generation with coal. Based on coal gasification, the project will integrate now-in-development technologies to capture and store CO_2 while producing hydrogen and low-carbon fuels for other uses such as transportation. Electric generation is the world's largest source of manmade CO_2 emissions, transportation the fastest growing. Letters of invitation recently went from U.S. Secretary of Energy Samuel Bodman to the appropriate ministers of member countries.